




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107-4431

JUL 8 - 1998

**SUBJECT:** Approval of Request for Ceiling Increase and Change of Scope for  
Unattributed Residential Soil Lead Site  
(Including 2020 Chestnut Street Property Site)  
Portsmouth, Virginia

**FROM:** Abraham Ferdas, Director   
Hazardous Site Cleanup Division (3HS00)

**TO:** Timothy R. Fields, Acting Assistant Administrator  
Office of Solid Waste and Emergency Response (5101)

**THRU:** Stephen D. Luftig, Director  
Office of Emergency and Remedial Response (5201)

**ATTN:** Thomas R. Sheckells, Director  
Region 3/8 Accelerated Response Center (5201G)

**ISSUE**

Region III has approved the attached Request for Ceiling Increase and Change of Scope for the Unattributed Residential Soil Lead Site (Site) which includes the 2020 Chestnut Street Property Site activated by the On-Scene Coordinator (OSC) on April 27, 1998 in Portsmouth, Virginia. The Site is distinct from, but associated with, the Abex (NPL) Site in Portsmouth, Virginia. The Site includes at least seven, and potentially more, residential properties impacted with soil-lead contamination within a large residential neighborhood surrounding the Abex Site. This soil-lead contamination may be from the former Abex foundry or another source or a combination of sources, but the source(s) is (are) currently unattributed to any particular source. This Removal response action is being undertaken pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. An assessment performed in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300.415, has identified a release or threat of release of hazardous substances at the Site which may be an imminent and substantial endangerment to the public health or welfare or the environment.

On April 27, 1998, the OSC activated the Superfund at the 2020 Chestnut Street Property Site in the amount of \$50K using his \$50K non-emergency authority. On June 4, 1998, the Director of the Hazardous Site Cleanup Division verbally approved an additional \$50K for a total of \$100K. Because conditions at the Site meet the Removal criteria set forth in the NCP, Section 300.415, and

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pursuant to Delegation of Authority 14-1-A giving the Director, Hazardous Site Cleanup Division (HSCD) authority to approve CERCLA Removal Actions with a total cost of less than \$2 million and completion within 12 months, Region III has approved this request for ceiling increase and change of scope. This approval is for an additional \$1,355,000 and a total of \$1,455,000, of which \$1,245,000 are extramural costs.

Attachment: Request for Ceiling Increase and Change of Scope

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107-4431

JUL 8, 1998

**SUBJECT:** Request for Ceiling Increase and Change of Scope  
Unattributed Residential Soil Lead Site  
(Includes 2020 Chestnut Street Property Site)  
Portsmouth, Virginia

**FROM:** *for* William D. Steuteville, On-Scene Coordinator *William D. Steuteville*  
Removal Response Section (3HS31)

**AND:** Randy Sturgeon, Remedial Project Manager *Randy Sturgeon*  
General Remedial Section (3HS23)

**TO:** Abraham Ferdas, Director  
Hazardous Site Cleanup Division (3HS00)

**I. ISSUE**

This Request for Ceiling Increase and Change of Scope is for the Unattributed Residential Soil Lead Site (Site) which includes the 2020 Chestnut Street Property Site. The Site is distinct from, but is closely associated with, the Abex Superfund (NPL) Site (Abex Site) in Portsmouth, Virginia. The property at 2020 Chestnut Street is the most significantly contaminated of at least seven, and likely more, residential properties known to be impacted with soil-lead contamination within a large residential neighborhood surrounding the former Abex foundry. This soil-lead contamination was found during Abex Site investigations and may be from the former Abex foundry or from another source or sources, but the source is currently unattributed. Because the source of lead contamination is uncertain at this time, Removal authorities are being used to address the contaminated residential properties rather than using Remedial authorities.

This Removal action only addresses soil-lead contamination in the vicinity of the Abex Site which was or is found as part of Abex Site activities, including soil-lead found during the lead-source study proposed herein to identify Abex lead-sources among other lead sources, but which (soil-lead contamination) is, at the time of this Removal action, unattributable to the Abex Site or will not be timely addressed by the appropriate potentially responsible parties (PRPs).

On April 27, 1998, the On-Scene Coordinator (OSC) in coordination with the Remedial Project Manager (RPM) for the Abex Site activated the Superfund in the amount of \$50K to address lead-contaminated soil and dust at the 2020 Chestnut Street Property Site. On June 4, 1998 the Director of the Hazardous Site Cleanup Division gave verbal approval for an additional \$50K for the 2020 Chestnut Street Property Site for a total of \$100K. Additional monies and a change of scope of work are now required to complete necessary Removal response activities at 2020 Chestnut Street and

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other residential properties of the Unattributed Residential Soil Lead Site. The OSC and RPM have determined that the Site meets the criteria for Removal action pursuant to Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Additional funding in the amount of \$1,355,000 is needed to complete Removal activities. This response action is expected to be completed in less than 12 months. Your approval of this ceiling increase in the amount of \$1,355,000 for a total ceiling of \$1,455,000, of which \$1,245,000 are Extramural (Regional Allowance) Costs, is requested pursuant to Delegation of Authority 14-1-A, giving the Director of the Hazardous Site Cleanup Division authority to approve CERCLA Removal actions costing less than \$2,000,000 and no more than 12 months duration. Your approval also verifies, in writing, the verbal approval you gave for an additional \$50K (total \$100K) for the 2020 Chestnut Street Property Site.

## II. BACKGROUND

### A. Site description

#### 1. DEFINITIONS

**(Abex) Operable Unit # 1:** Abex Operable Unit # 1 (Operable Unit # 1) is the area within a 700' radius of the former Abex foundry. To date, almost all Abex Site study and remediation has occurred within this 700' radius of the Abex Site.

**(Abex) Operable Unit # 2:** Abex Operable Unit # 2 (Operable Unit # 2) is an area of primarily residential properties outside of a 700' radius surrounding the former Abex foundry that may have been impacted with lead contamination from the former Abex foundry.

Heretofore, cleanup and study of the Abex Site has focused on the inner 700' radius. Future Abex Remedial Investigation will address soil-lead contamination in Operable Unit # 2. At this time it is not known what impact Abex Site lead has had in Operable Unit # 2.

**The Unattributed Residential Soil Lead Site:** The Unattributed Residential Soil Lead Site (Site) includes only those designated *residential properties and/or recreational areas used and frequented by children* (herein "recreational areas") outside Operable Unit # 1 shown to be contaminated with elevated concentrations of soil-lead not attributed to the Abex Site or not addressed in a timely manner through Abex Site Removal activities or not otherwise addressed in a timely manner by the appropriate PRPs, provided such elevated soil-lead concentrations are identified pursuant to soil sampling and analyses performed as part of Abex Site RI/FS activities and/or identified pursuant soil sampling and analyses performed pursuant to Section V, Paragraph 15, *Proposed Action*, herein, only. The Unattributed Residential Soil Lead Site includes *only* residential properties and recreational areas expressing such elevated soil-lead contamination outside Operable Unit # 1 as identified pursuant to specific sampling and analyses described above.

**2020 Chestnut Street Property Site:** The 2020 Chestnut Street Property Site is a single family dwelling at 2020 Chestnut Street and an adjoining undeveloped lot at 2024 Chestnut Street. The 2020 Chestnut Street Property Site meets the criteria herein for the Unattributed Residential Soil

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Lead Site. Cleanup at the 2020 Chestnut Street Property Site was previously begun pursuant to the OSC's delegated \$50K authority.

The property at 2020 Chestnut Street is the most significantly contaminated of at least seven (and potentially other) residential properties known to be impacted with soil-lead contamination greater than 500 parts per million (ppm) in the residential neighborhood immediately surrounding the Abex Site. Because the property at 2020 Chestnut Street was the most significantly contaminated residential property and, in the OSC's belief, required immediate action, the OSC activated the Superfund to begin to address the 2020 Chestnut Street property while awaiting approval of this additional funding request. The Unattributed Residential Soil Lead Site (Site) includes the 2020 Chestnut Street Property Site and any other lead-contaminated residential properties and recreational areas as defined herein.

**Non-specific Urban Soil-lead Contamination** Non-specific urban soil-lead contamination in older urban areas is a national problem. Portsmouth, like many other older urban areas, has experienced urban lead problems. It is not the purpose of the Environmental Protection Agency (EPA), by this action or by activities at the Abex Site, to address, highlight, or identify such urban lead problems in Portsmouth. However, the important process of determining the extent of lead attributed to the Abex Site may reveal specific soil-sample locations of elevated soil-lead which are not attributed to, or immediately attributable to, the Abex Site or another source. Such elevated residential soil-lead concentrations inadvertently revealed by EPA through its endeavor to determine the extent of Abex Site lead which meet the definition herein for the Unattributed Residential Soil Lead Site will be addressed pursuant to this Removal Action.

**Exclusion:** The Unattributed Residential Soil Lead Site specifically does not include commercial properties and does not include any other soil-lead contamination except residential soil-lead contamination identified through sampling and analyses performed pursuant to the Abex RI/FS or sampling and analyses performed pursuant to Section V, Paragraph 15, herein.

**Specific Properties Included in the Unattributed Residential Soil Lead Site:**

EPA is currently aware of seven residential properties any of which, upon confirmation of soil-lead concentration, may be designated for inclusion in the Unattributed Residential Soil Lead Site. This includes the properties at the 2020 Chestnut Street Property Site, which has already been so designated. These seven residences have been identified based upon sample analyses conducted pursuant to the Abex Site RI/FS. The OSC and RPM are further assessing these properties at this time. Additional residential properties and recreational areas (in addition to the seven noted herein), if found to be lead-contaminated pursuant to Abex Site RI/FS activities or sampling activities proposed herein, will also become part of the Unattributed Residential Soil Lead Site upon confirmation by the OSC and RPM and will be subject to Removal response actions set forth herein.

## 2. SITE DESCRIPTION

The Unattributed Residential Soil Lead Site is located in a primarily residential area, but some commercial and industrial properties are located nearby, including the Norfolk Naval Shipyard which is located immediately east of the Site and numerous current and historic industrial properties

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in and around the Unattributed Residential Soil Lead Site, including the former Abex foundry. Historic industrial locations may be sources of lead.

There are many older, wood-frame houses in the area dating from before 1970. Prior to 1970, wood-frame and wood-sided houses were often painted with lead-based paint. Lead paint, when weathered or otherwise stripped from such wood-framed or wood-sided houses, has been shown to cause or contribute to soil-lead contamination around such older houses in some cases. Due to the predominance of wood-frame and wood-sided houses in this area, it is likely that some soil-lead contamination in Operable Unit # 2 is due to lead paint peeled, chipped and weathered or stripped from houses and other painted structures.

The Abex Operable Unit # 1 Remedial Investigation and Feasibility Study (RI/FS) identified the former Abex foundry as a potential lead source for some of the soil-lead found in Operable Unit # 2 and identified other potential lead sources in addition to the former Abex foundry.

Until such time as the lead source or sources are identified or until potentially responsible parties (PRPs), if any, are identified for such lead sources and agree to undertake necessary Removal of such lead, EPA will continue to address significant soil-lead contamination pursuant to Removal authorities. EPA will address elevated residential soil-lead contamination, as defined herein, in the Unattributed Residential Soil Lead Site as a single Site with an unknown lead source or sources.

This Removal action includes a study and investigation to identify sources of soil-lead in Operable Unit # 2 (See Section V.) RI/FS activities at the Abex Site are being planned which seek to identify the extent of Abex Site soil-lead contamination in Operable Unit # 2. Sampling and analyses through these two processes only will be used to identify and evaluate additional residences and recreational areas for Removal response action as defined herein.

The residential community outside Operable Unit # 1 includes single family and multiple family dwellings. Many adults, young adults, children and woman of child-bearing age live immediately outside Operable Unit # 1. Individuals residing outside Operable Unit # 1 at or near the 7 residential properties identified by prior Abex RI/FS data, or living at or near elevated soil-lead contamination which may be identified during future Abex activities, may be exposed to elevated soil-lead contamination.

The former Abex Foundry facility is fenced. Foundry buildings have been demolished. Several blocks of residential and commercial properties have been remediated through historic Removal cleanup actions beginning in 1986. Removal and Remedial activities have been conducted within a radius of 700 feet of the former facility. Further Remedial activities are planned within the 700' radius of the Site.

## **B. Site background**

Since the mid-1980s, EPA has been investigating soil-lead contamination in the area of the former Abex foundry.

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The Pneumo Abex Corporation (Abex) operated a brass and bronze foundry from 1928 to 1978. The foundry used sand molds to cast railroad parts. The sand used in the molds was contaminated with heavy metals and was disposed in a sand pit located one block north of the facility. Additionally while the foundry operated, foundry stack emissions included fine particulate matter with elevated concentrations of lead, copper and zinc associated with foundry processes.

In July 1983, the NUS corporation performed a site inspection of the Abex property for EPA. Three on-site soil samples contained lead in concentrations ranging from 450 to 10,400 ppm.

In April 1986, the EPA Technical Assistance Team (TAT) Contractor collected soil samples from properties adjacent to the former Abex foundry. Lead concentrations up to 12,800 ppm were detected in this vicinity. The Abex Corporation performed an emergency cleanup of the former disposal area and adjacent areas.

In October 1986, a Removal action was performed in response to a consent agreement between Abex Corporation and EPA. Several areas adjacent to the former foundry were subsequently excavated from 1986 until 1989.

Abex was listed on the National Priorities List on August 8, 1990.

In 1989, Abex began a Remedial Investigation and Feasibility Study (RI/FS) under the oversight of the Virginia Department of Environmental Quality (VADEQ). RI/FS soil sampling and analyses, including sampling at the 2020 Chestnut property, was conducted in approximately 1991. The analyses revealed elevated soil-lead concentrations at the 2020 Chestnut Street Property Site and other areas beyond the 700 foot radius of the Abex Site. Abex determined the elevated lead concentrations at 2020 Chestnut were the result of contamination from sources other than Abex. Proposed Remedial actions at the Abex Site include excavation of lead-contaminated soils greater than or equal to 500 ppm in residential properties within the 700 foot radius of the Abex Site.

In 1991, the Regional Administrator for EPA Region III signed a funding request approving the expenditure of Superfund monies for Removal activities to address lead-contaminated soil in residential and recreational areas adjacent to the Abex Site.

In 1992, EPA issued a Consent Agreement and Order to Abex to address elevated soil-lead concentrations in residential properties and recreational areas adjacent to the former Abex foundry.

In 1992, a Record of Decision (ROD) was issued for the Abex Site which only addressed the area within the 700' radius of the Abex Site (Operable Unit # 1). The ROD has been subsequently amended.

In its RI/FS, Abex identified at least seven residential properties in Operable Unit # 2 with soil-lead concentrations of 500 ppm or greater. Abex determined that lead contamination at the 2020 Chestnut Street property was not due to Abex sources. Abex also determined that certain lead contamination in Operable Unit # 2 was potentially due to Abex while other elevated lead concentrations in Operable Unit # 2 were not due to Abex lead. [EPA has not yet determined the

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source of lead concentrations at all 7 residential properties mentioned herein or in Operable Unit # 2 generally. Abex is one source under consideration by EPA at this time.]

A Removal assessment of the 2020 Chestnut Street Property Site was begun in December 1997. EPA's Site Assessment and Technical Assistance contractor (SATA) performed confirmatory soil sampling. The soil analyses confirmed elevated soil-lead concentrations at the 2020 Chestnut property, including one sample in excess of 5,000 ppm. Sampling in April revealed lead concentrations as high as 9,000 ppm in an empty undeveloped lot immediately adjacent to 2020 Chestnut Street which is visibly indistinguishable from and is, by current use and practice, a part of the 2020 Chestnut Street property in everything but title and deed (and will be treated as such by EPA pursuant to this Removal action). The Agency for Toxic Substances and Disease Registry (ATSDR) and Region III toxicological assessments have concluded that lead concentrations at the 2020 Chestnut Street property pose a threat to the public.

In 1998, EPA Region III Superfund management directed the Superfund Removal Program to address lead concentrations at the 2020 Chestnut Property Site, and similar lead concentrations in other residential properties in Operable Unit # 2. The Remedial Program was tasked to identify the extent and source of lead contamination in Operable Unit # 2. Removal authorities (either fund-lead or enforcement, as appropriate) will be used to address elevated concentrations of residential soil-lead in Operable Unit # 2, when such elevated soil-lead concentrations are identified by the Remedial Program. The Remedial Program is undertaking further study and remedial investigation in Operable Unit # 2 to identify residences with elevated lead concentrations.

On April 27, 1998, the OSC determined that a release of hazardous substances had occurred which may be an imminent and substantial endangerment to public health, welfare or the environment. The OSC determined, in consultation with the RPM, that Removal action was warranted pursuant to CERCLA 104(a) and the NCP. The OSC issued Special Bulletin A for the 2020 Chestnut Street Property Site authorizing the expenditure of \$50K in Superfund monies to initiate Removal response activities to mobilize resources, develop plans for and commence expeditious cleanup of the 2020 Chestnut Street Property Site. The OSC issued a Delivery Order to EPA's Emergency Response and Remediation Services (ERRS) contractor to perform the response. At the same time, the OSC and the Abex Remedial Project Manager (RPM) began jointly drafting a request for additional funding and change of scope of work for the Unattributed Residential Soil Lead Site. This Request for Ceiling Increase and Change of Scope is submitted jointly by the OSC and Abex RPM for the Hazardous Site Cleanup Division (HSCD) Director's signature and supersedes and amends the Special Bulletin A for the 2020 Chestnut Street Property Site.

On June 4, 1998, the Director of the Hazardous Site Cleanup Division gave verbal approval for the expenditure of an additional \$50K at the 2020 Chestnut Street property Site for a total of \$100K.

### **C. Quantities and types of substances present**

During RI/FS investigations, soils along the "windrose" axes as determined using the former Abex foundry as the center were sampled and analyzed for lead in an attempt to measure the impact of Abex dust emissions. Several surface soil samples were collected along these axes and lead was detected above 500 ppm in 10 of these samples representing at least seven residential properties,

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including a soil sample collected from the yard of 2020 Chestnut Street which revealed a lead concentration of 33,700 ppm. Other properties in Operable Unit # 2 were shown to have elevated soil-lead concentrations of 601; 1,970; 745; 1,620; 966 and 553 ppm, respectively. In December 1997, SATA collected six soil samples to confirm the elevated soil-lead concentrations at 2020 Chestnut Street. Two soil samples revealed 4,043 and 5,543 ppm of lead, respectively. Further soil sampling in April 1998 revealed soil-lead concentrations as high as 9,000 ppm. These soil samples represent approximately two-hundred tons of lead-contaminated soils at 2020 Chestnut Street. Other soil-lead contamination will likely be revealed as investigation of Operable Unit # 2 proceeds.

Lead is a hazardous substance pursuant to CERCLA because it is listed at 40 CFR Section 302.4.

#### **D. National priorities list status**

The Unattributed Residential Soil Lead Site is not on or proposed for the National Priorities List, but is in close proximity to, and is closely associated with, the Abex Site and shares lead as the primary hazardous substance of concern. EPA believes the Abex Site is one source of lead in Operable Unit # 2, but does not know the extent of Abex lead in Operable Unit # 2 at this time. Until such time as the extent of Abex Site lead is understood, the Unattributed Residential Soil Lead Site will continue to be considered a separate site from the Abex Site.

#### **E. State and local authorities' roles**

The OSC is coordinating Removal response activities with local and State officials. State and local officials have a high degree of interest for soil-lead abatement activities in the area of the Abex Site, including soil-lead abatement activities proposed herein. In order to assure that State and local officials have a significant role and voice in the planning and implementing of response actions proposed herein, the OSC has established a "unified command" for the management of these response actions including representatives of the City of Portsmouth and the Virginia Department of Environmental Quality.

Although the City of Portsmouth and the Portsmouth Redevelopment and Housing Authority (PRHA) are considered PRPs for the Abex Site, neither the City of Portsmouth nor the PRHA is, at this time, considered a PRP for the Unattributed Residential Soil Lead Site.

### **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT**

Section 300.415 of the NCP (40 CFR ) lists the factors to be considered in determining the appropriateness of a Removal action. Paragraphs (b)(2)(i), (iv), and (vii) of Section 300.415 directly apply as follows to conditions in the Unattributed Residential Soil Lead Site:

300.415 (b)(2)(i) "actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants"

At least seven residential properties are known to be impacted by elevated soil-lead concentrations. Residents of these houses are potentially exposed to lead, a hazardous substance, in soils at the Site

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in their homes and properties. There are actual or potential exposures of nearby human populations to hazardous substances.

300.415 (b)(2)(iv) "high levels of hazardous substances or pollutants or contaminants in soil largely at or near the surface, that may migrate"

Abex RI/FS analyses of soil at the Site revealed lead concentrations of as high as 33,700 ppm in surface soil (0 to 6 inches deep). EPA's analyses revealed lead concentrations as high as 9,000 ppm in surface soil. Such contaminated surface soils may be subject to migration [tracking] by humans and migration due to wind and water erosion, entrainment and transport. Such migration of contaminated soil may result in transport of lead contamination into houses on Site. High levels of hazardous substances are in soils largely at or near the surface, that may migrate.

300.415 (b)(2)(vii) "the availability of other appropriate Federal or State mechanisms to respond to the release"

The Virginia Department of Environmental Quality (VADEQ) has referred the Site, as part of the overall Abex Site, to EPA for EPA response action. Abex has declined to undertake response action at the Site due to its stated belief that the lead is not from the former Abex foundry. The City of Portsmouth does not have the resources to fund this undertaking. The EPA Region III Superfund Remedial Program does not have the resources to address the Site in a timely manner. No other resources are available to address lead contamination at the Site.

#### **IV. ENDANGERMENT DETERMINATION**

The Agency for Toxic Substances and Disease Registry (ATSDR) and Region III toxicological assessments concluded that elevated lead concentrations in residential properties at the Site pose a threat to public health. Lead, a hazardous substance, has been released at the Site exposing the public living in residences on the Site and in the immediately surrounding community to hazardous substances. The release or threat of release of hazardous substances at or from the Site may be an imminent and substantial endangerment to public health or welfare or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

##### **A. Proposed Actions**

The actions proposed for the Site are designed to eliminate the immediate threat posed by the presence of lead in soil and dust at the Site until such time as the source(s), and PRPs for the source(s), has been identified and/or the Remedial Program is in a position to address elevated Abex soil-lead concentrations in Operable Unit # 2. These actions are consistent with the ROD for the Abex Site, previous Removal actions at the Abex Site and EPA III Removal actions elsewhere to address soil-lead contamination. Until such time as the source of the lead at the Site is identified to EPA's satisfaction and/or PRPs for such lead sources are identified, residential properties where unattributed residential soil-lead concentrations of 500 ppm or greater will be removed and properly

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disposed as described below. Based on the review of background information, analytical data, and the above mentioned criteria, the following actions are planned:

1. Excavate, stabilize, as needed, and transport for off-Site disposal lead-contaminated soil of 500 ppm lead or greater from currently occupied residential properties or public recreational areas identified pursuant to Abex Site RI/FS sampling or identified pursuant to sampling performed pursuant to Paragraph 15, below. Soil excavation in areas of soil-lead concentrations of 500 ppm or greater shall be excavated to achieve soil-lead concentrations less than 500 ppm or until the water table is reached which ever is achieved first.
2. In certain circumstances, "residential properties and recreational areas" may include land parcels and real property immediately contiguous to, and integrally connected by current use and practice, to occupied residential properties and/or recreational areas, such that lead contamination at such immediately contiguous and integrally connected properties results in actual or potential exposure to residents of such nearby residences or children using recreational areas and, thereby necessitates that response action as described in 1, above, be implemented. Such contiguous or integrally connected properties do not have to be associated by title, deed, or ownership to occupied residential properties or recreational areas to which they are contiguous or integrally connected by current use and practice. Determination regarding the eligibility of such contiguous and integrally connected properties for soil excavation and disposal will be made by the OSC in consultation with the RPM.
3. Backfill excavated areas with clean fill and topsoil. If soil excavation reaches the water table and, therefore, excavation ends before all soil-lead concentrations of 500 parts per million (ppm) or greater have been removed, a permanent marking layer shall be placed prior to backfilling to mark the area of 500 ppm soil-lead not excavated.
4. Plant appropriate ground cover for soil stabilization and erosion and sedimentation control, including grass and other plants consistent with existing ground cover and vegetation.
5. Remove lead-contaminated dust, if any, from the interior of residences identified pursuant to Paragraph 1, above, if interior dust analyses reveal elevated lead concentrations in such residences.
6. Replace or repair driveways, sidewalks and patios or other property improvements or personal property removed or damaged during soil excavation and/or backfilling operations.
7. Replace lead-contaminated rugs and furnishings in residences cleaned pursuant to Paragraph 5, above.
8. Conduct soil and interior dust sampling, as needed, for properties identified pursuant to Paragraph 1, above.
9. Develop excavation plans and interior dust abatement plans.

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10. Dispose of contaminated soil and dust at an appropriate disposal facility. There is no appropriate storage area on Site to accommodate the short-term storage of excavated soils. All excavated soils must be loaded directly onto trucks for transportation and disposal ("load & go"). This will require greater planning and up-front disposal arrangements.
11. Dispose of contaminated rugs and furnishings, as appropriate.
12. Offer and, as needed, arrange for voluntary relocation of residents of excavated properties and certain immediately impacted residences adjacent to properties undergoing soil excavation during such soil excavation and residents of properties undergoing interior cleaning during such interior cleaning activities. Adjacent residents will only be offered relocation when, in the determination of the OSC in consultation with the RPM, such residents will be significantly impacted by or have access to and/or use of their properties significantly restricted by soil excavation activities or when such relocation will enhance or expedite the government's ability to conduct soil excavation or improve public safety. Eligible residents who accept voluntary relocation will be offered reimbursement of reasonable relocation expenses, including temporary lodging and a per diem payment consistent with Federal travel regulations for the Portsmouth area. Lodging costs will be borne by EPA. Per diem will be paid in cash up to one week in advance not to exceed the actual relocation schedule. Adults and children 12 and over will be provided full Federal per diem. Children under 12 years will be provided one-half the Federal per diem. The head of household shall be given the per diem payment(s) for all minor children present. Other expenses will be subject to approval on a case-by-case basis and shall be reimbursed after such approval upon submission of appropriate cost documentation, including receipts from verifiable vendors. Such approval shall be made by the OSC in consultation with the RPM and appropriate EPA contracting and travel officials. Reimbursement shall not be made for expense items not allowable pursuant to Federal travel regulations.
13. Provide security for residences and properties during excavation and interior cleaning.
14. Conduct sampling and analyses of lead-contaminated soils to determine the extent of contiguous soil-lead contamination in specific residential properties and public recreational areas meeting the criteria established in Paragraphs 1 and 2, above.
15. Investigate and/or study source(s) of soil-lead concentrations in Operable Unit # 2. Such study and investigation shall seek to establish the source of lead contamination in the Unattributed Residential Soil Lead Site. Such study and investigation may require sampling and investigation of soil-lead and potential soil-lead sources in areas outside Operable Unit # 2, including but not limited to, the Abex Site and other sites, facilities or properties outside Operable Unit # 2, to the extent such sampling and investigation is needed to establish source(s) of lead contamination in lead-contaminated soils in Operable Unit # 2. This study and investigation may include, but are not necessarily limited to:
  - a. Soil sampling and other testing, and chemical and physical analyses of soils and other lead-contaminated media or lead-bearing materials.
  - b. Literature search and review of other soil-lead studies.

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- c. Testing and application of innovative technologies or application of existing technologies in an innovative manner or not previously used for such investigation.
  - d. Statistical analyses of soil data and other data.
  - e. Research of historical land use in area.
  - f. Assessment of past and current potential lead sources in Operable Unit # 2, including but not necessarily limited to, the Abex Site, lead paint, leaded gasoline, trash-burning, river fill, the Norfolk Naval Ship Yard, and other activities.
  - g. Retaining the services of technical expert(s), as needed, to conduct or assist in such study and investigation.
16. Provide specific, timely, community-oriented public communication and information sharing to assure the full access and participation by the community in the Site study and cleanup process. This community meets EPA's definition of an environmental justice community because the impacted community is below the State average for income and has a higher percentage of minority population(s) than the State average. Community outreach to an environmental justice community should seek to assure that such a community, which might not otherwise have access to information and technical expertise, has the fullest access to information and technical explanations of such information. This community outreach effort may involve intensive, personal efforts within the impacted community. Historic and current data and information will be made accessible and available to the public.
17. Other actions specifically found to be necessary or required for legal, safe, and/or efficient performance of the activities in 1-16, above, and/or to perform such activities in a manner consistent with applicable or relevant and appropriate regulations (ARARs), to the extent practicable. Determination of necessity shall be made by the OSC in consultation with the RPM.

**B. Estimated costs**

	<u>Current Costs</u>	<u>Proposed Costs</u>
<u>Extramural Costs</u>		
ERRS	\$ 60,000	\$ 600,000
SATA	16,000	100,000
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Subtotal	\$ 76,000	\$ 700,000
10% Contingency	-0-	70,000
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Total ERRS & SATA	\$ 76,000	\$ 770,000

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Unallocated Extramural for Soil-Lead Source Study	10,000	375,000
Unallocated Extramural for Community Outreach Effort	-0-	100,000
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<b>Total Extramural</b>	<b>\$ 86,000</b>	<b>\$1,245,000</b>
<b><u>Intramural Costs</u></b>		
EPA Direct	\$ 4,500	\$ 70,000
EPA Indirect	9,500	140,000
	-----	-----
<b>Total Intramural</b>	<b>\$ 14,000</b>	<b>\$ 210,000</b>
<b>Estimated total project ceiling</b>	<b>\$100,000</b>	<b>\$1,455,000</b>

It is currently not known when this Removal action will be completed because the Remedial Program shall be undertaking Remedial investigation to determine the extent of soil-lead contamination in the Operable Unit # 2 attributable to the former Abex foundry and more lead-contaminated residences may be revealed during such RI/FS activity. If Removal response activities anticipated herein are not completed within the statutory 12-month limit for Removal actions, the OSC and RPM will evaluate the need for additional Removal action based upon the criteria for an exemption to the 12-month limitation for Removal action set forth in the NCP and request such exemption as necessary and appropriate.

### **C. OSC and RPM Responsibilities**

The OSC and RPM are jointly responsible for the implementation and completion of the response actions herein. However, each shall be primarily responsible for specific tasks as outlined below:

The OSC shall be primarily responsible for residential soil excavation and interior cleaning, as necessary, and related activities for properties with soil-lead concentrations of 500 ppm or greater. The OSC shall be primarily responsible for Site Polreps and the OSC Report, if any. The OSC shall provide support and technical guidance, as needed, to the RPM for the conduct of the study and identification of the source(s) of soil-lead contamination in the area outside of the 700-foot radius zone of the Abex Site. The OSC shall also facilitate the use of expedited contracting mechanisms, as necessary, for the conduct of the aspects of the study and investigation of soil-lead sources, where contracting mechanisms normally available to the Remedial Program are inadequate.

The RPM shall be primarily responsible for the lead-source identification study. The RPM, with the support of the assigned Community Relations Coordinator, shall be primarily responsible for community involvement activities. The RPM shall assist in the oversight of residential soil excavation and interior cleaning. The RPM shall be primarily responsible for other activities related to this Removal response not specified herein.

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The RPM shall be solely responsible for all activities outside the scope of this Removal action related to the Abex NPL Site and for any activities solely related to the Abex NPL Site.

#### **D. Contribution to Remedial Performance**

The Unattributed Residential Soil Lead Site is distinct from the Abex Site. However, the Sites are related geographically and share the same principal contaminant of concern, lead. EPA believes it is likely that the Abex Site may be one source of lead contamination in Operable Unit # 2. Therefore, EPA believes the two Sites are sufficiently related that every reasonable effort will be made to assure that Removal response actions at the Unattributed Residential Soil Lead Site are consistent with Remedial action at the Abex Site.

A Record of Decision (ROD) was issued by EPA in 1992 and amended in 1994. The ROD called for excavation of residential soil-lead concentrations greater than 500 ppm for residential properties. This Removal action will be consistent with the ROD for the Abex Site. Thereby assuring that such soil cleanups are fully consistent with Remedial performance.

#### **E. Compliance with ARARs**

The proposed Removal action set forth in this memorandum will comply with all applicable, relevant and appropriate environmental and health requirements, to the extent practicable, considering the exigencies of the situation. These requirements include manifesting hazardous wastes regulated pursuant to the Resource Conservation and Recovery Act (RCRA). If the excavated soil and interior dust wastes exhibit TCLP lead concentrations greater than 5 ppm, such soils shall be treated prior to land disposal consistent with RCRA.

The OSC is not aware of any other ARARs impacting the excavation and offsite disposal of lead-contaminated residential soil from an unknown source and residential interior dust cleaning pursuant to this Removal action. The OSC has requested that the Virginia Department of Environmental Quality (VADEQ) identify state ARARs.

#### **VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED**

EPA is aware of 7 residential properties outside Operable Unit # 1 with soil-lead concentrations greater than 500 ppm. If no action is taken or action is delayed, the people residing at the 7 properties identified herein or identified through future Abex activities will continue to be exposed to elevated soil-lead concentrations in their homes and properties.

#### **VII. OUTSTANDING POLICY ISSUES**

##### **1. Site Designation**

At this time it is unknown what relation, other than geographical and shared lead contamination, the Unattributed Residential Soil Lead Site has to the Abex Site. It is unknown at this time what one

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or more lead sources are responsible for soil-lead contamination in Operable Unit # 2. Until such time as the source(s) of lead in Operable Unit # 2 are better understood and determined to be from one or several distinct sources, the Unattributed Residential Soil Lead Site will be treated as one Site separate and distinct from the Abex Site or any other Site.

## **2. Cost Tracking**

To the extent practicable, costs will be tracked for each separate excavation and cleaning area or property. This will allow for future cost allocation of individual excavation and cleaning areas to distinct lead sources.

## **3. Site Administration and Management Responsibilities**

EPA's proposed response involves the NCP authorities and responsibilities of the OSC and Abex RPM. The OSC and RPM share responsibility for this response action. However, determination of primary responsibility with respect to specific components of this Removal action have been set forth in Section V(C), above. Where responsibility is not specifically set forth, such responsibility shall primarily fall to the RPM.

There are no outstanding policy issues.

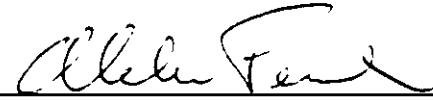
## **VIII. ENFORCEMENT**

The EPA Oil and Removal Enforcement Section has been provided with background information in order to pursue necessary enforcement action and decision making. See the Confidential Enforcement Addendum for more information.

## **IX. RECOMMENDATION**

Because conditions at the Site meet the conditions set forth in Section 300.415 of the NCP for a Removal Action, we recommend your approval of this request for ceiling increase and change of scope for \$1,355,000 for a total ceiling of \$1,455,000, of which \$1,245,000 are Extramural Costs.

Your signature below will confirm your approval or disapproval of this request for ceiling increase and change in scope for the Unattributed Residential Soil Lead Site. It will also verify, in writing, your verbal approval on June 4, 1998 of an additional \$50K for a total of \$100K for the Removal action at the 2020 Chestnut Street Property Site.

APPROVED:  DATE: 7/7/98

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

Attachment: Confidential Enforcement Addendum

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